

## **Seminar**

### **Imaging molecular dynamics with femtosecond UV and VUV laser sources**

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Development of femtosecond laser sources across the spectrum - from IR to X-rays - has created enormous opportunities to study structure and dynamics of matter on shortest possible timescales. Generation of short VUV/XUV pulses facilitated by high harmonic generation is particularly favorable to study atoms and molecules as electronic resonances occur in the 50-300nm region with high cross sections.

One of the interesting applications is - photoionization of chiral molecules by circularly polarized UV and VUV sources. Photoelectron angular distributions show strong signatures of chirality where electrons are scattered forward or backward with respect to laser direction. This effect is termed 'Photoelectron Circular Dichroism' and is atleast 3 orders of magnitude more sensitive than conventional absorption based techniques.

In my talk, I will describe the experiments done during my post-docs in Amsterdam and Zurich on chiral molecules with UV/VUV sources and outline future research directions in 'VUV molecular science'.

***Tuesday, Jul 12<sup>th</sup> 2016***

***4:00 PM (Tea/Coffee at 3:45 PM)***

***Seminar Hall, TCIS***